

RAIZ



Forest and Paper Research Institute

**TECHNOLOGICAL
SCOUTING NEWSLETTER**

November 2021

Highlights

- The packaging segment continues to be the main subject of development by P&P companies, from moulded fiber trays, packaging foams to paper straws.



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Services Provided by RAIZ Technological Scouting:

Technological Scouting Newsletter (monthly)

Technological Scouting On Demand (specific technological issues, upon request)

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START-UP OF THE MONTH



Spinnova, an already known Finnish start-up, which has developed a technology that can transform cellulosic fibers into fibers for the textile industry, has announced a 2.2-million-euro investment in an in-house R&D yarn spinning line for research and development purposes. The investment will improve Spinnova's commercial textile development, enhance brand collaborations, and further increase Spinnova's market entry capabilities.

In May 2021, Spinnova, along with Suzano, announced scaling up its commercial scale production facility in Finland to 1 million tonnes of annual capacity by 2031. It is now understood that the two companies are forming a joint venture named Woodspin, and that their factory project is proceeding according to the original schedule. The production spaces are expected to be ready for technology installations at the end of next summer, and for the factory to be completed by end of 2022. The factory complex will additionally include Suzano Finland's micro-fibrillated cellulose refining, the company's first ever investment outside of Brazil.

Read more > [Spinnova](#) | [Spinnova](#)



PACKAGING



Paper Age

Rottneros and Arctic Paper: new production plant for moulded fiber trays

Rottneros and Arctic Paper have signed a Letter of Intent with the aim of building a production plant for moulded fiber trays. Based on Rottneros's primary fiber, the production will be focused on high barrier packaging, modified atmosphere packaging with extended shelf life as well as on packaging with lesser functional demands. The produced products are expected to withstand heat and will be suitable for ready-made foods, such as frozen and chilled dishes, currently facing a rapidly growing market.

Read more > [PaperAge](#)

● Technological
● Product Development



Packaging Europe

SIG: new paper straws

SIG has announced that it will add three new straws to its existing portfolio, with the aim of increasing the number of alternatives to single-use plastic straws available to beverage manufacturers.

Adding to the existing paper straight straw and paper U-straws for aseptic carton packs, SIG will launch a patented telescopic straw, ideally suited for small carton packs, which can be extended once inserted into the carton.

SIG adds that the structure and diagonal cut of the straws make them robust enough to piece the closed straw hole of the carton pack.

Read more > [Packaging Europe](#)

● Technological
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PACKAGING



Cision

Stora Enso: New portfolio for bio-based packaging foam

Last August, Stora Enso has announced branding as Papira® its paper fiber-based and fully paper-recyclable cellulose foam for protective and cushioning material in packaging. The foam was developed by the start-up Cellutech, later acquired by Stora Enso. It is a fully bio-based and biodegradable foam that is fully recyclable in any paper stream. It can be fabricated by using different foam cutting techniques and lamination.

Stora Enso now presents a new foam product for its portfolio, the Fibrease®, made with up to 98% renewable materials, being a soft yet resilient material with a memory foam-like behavior and can be fabricated by using different foam cutting techniques and thermoforming. It comes with a high insulating capacity and is suitable for thermal packaging. The foam is recyclable in the paper and board streams and adapted for recycling in closed loops to new material and products.

Read more > [Cision](#)



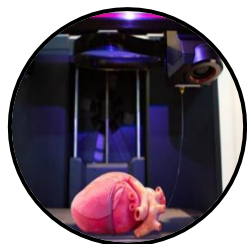
Stora Enso

New polymer coating for paper cups

Stora Enso has developed UltraThinPE Tec®, a new polymer coating that significantly reduces the share of plastic coating in foodservice boards and applications such as single-use paper cups. The technology is presently used in the production of Stora Enso's Cupforma product range for paper cups. UltraThinPE Tec® reduces plastic coating weight by up to 40% when compared to Cupforma Natura products with polyethylene or renewable PE Green coatings (bio-based polyethylene). It offers barrier performance, heat sealability and a fast implementation time. UltraThinPE Tec® coatings are produced at Stora Enso's Imatra site in Finland and Forshaga site in Sweden.

Read more > [Stora Enso](#)

BIOREFINERY



UC

University of Coimbra: 4D printing based on bacterial cellulose

A multidisciplinary team of UC researchers has developed materials for making 4D printing sustainable and ecological, based on cellulose produced by bacteria. The project opens doors to countless applications, from medicine to transport and the textile sector. 4D printing arises from 3D printing, adding the time dimension, allowing printing intelligent three-dimensional objects, that is, objects that, with time and through external stimuli, such as temperature, light or pH, among others, change shape. The celluloses obtained from the bacteria were mixed with different polymers (with different properties from celluloses') and, from there, biocomposites and filaments suitable for 4D printing were developed. Applications are foreseen as devices that can work in places where there is no electricity, devices that can change shape according to the mechanical demand they have, smart clothes for high-competition athletes, which regulate perspiration according to temperature environment and biomedical devices.

Read more > [UC](#)

● Technological
● Product Development



UPM

UPM: new ways to use green liquor dregs

UPM Pulp, along with the UPM Sustainability R&D team has launched a project with Tapojärvi Oy, a Finnish specialist in mining and mill services, for refining green liquor dregs into products for construction materials with a lower carbon footprint than the common materials used. Testing of the UPM's residue began in 2017 with a disused lime kiln at UPM's closed pulp mill, where green liquor dregs' ability to be processed for the earth construction market was successfully tested. UPM found that limestone is not required for the treatment of green liquor dregs, contrary to the production of cement, thereby reducing the product's environmental load. The next step is to implement industrial-scale trials using both UPM's side streams of green liquor dregs and ashes.

Read more > [UPM](#)

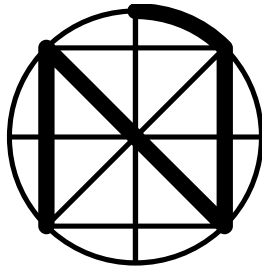
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